

Remarks/Arguments:

Claims 1-11 are pending and stand rejected.

By this Amendment, claims 1-2, 4-7, 9 and 11 are amended, claims 3, 8 and 10 are cancelled without prejudice and new claims 13-16 are added.

No new matter is added by the claim amendments and new claims. Support for the claim amendments and new claims can be found throughout the original specification and, for example, in the original specification at Page 8, line 5 to Page 9, line 21; Page 14, lines 8-14 and Page 15, lines 1-6.

Specification Objections

In the Office Action, at item 1, the specification is objected to for the use of embedded hyperlinks and/or other forms of browser-executable code on pages 3 and 26.

Applicants have amended page 3 from "http://www.ietf.org/rfc/rfc3489.txt" to --ietf.org/rfc/rfc3489.txt-- and from "http://www.ipv6style.jp/jp/tryout/20030929/2.shtml" to --ipv6style.jp/jp/tryout/20030929/2.shtml-- to remove such embedded hyperlinks. With regard to page 26 of the original specification, Applicants can not find any such embedded hyperlinks or browser-executable code. If the Examiner believes that such code is included in page 26 of the original specification, the Examiner is asked to specifically point out such code in the next Office Action.

Accordingly, Applicants submit that the specification objection regarding embedded hyperlinks and/or browser-executable code is now overcome.

In the Office Action, at item 2, the specification is also objected to because of informalities therein.

Applicants have amended the specification at pages 3 and 6, as suggested by the Examiner to overcome these objections.

Reconsideration is respectfully requested.

Rejection of Claims 1-11 under 35 U.S.C. §102(b)

In the Office Action, at item 4, claims 1-11 are rejected under 35 U.S.C. §102(b) as anticipated by Aggarwal et al. (U.S. Patent No. 5,675,741, hereafter referred to as Aggarwal).

Reconsideration is respectfully requested.

Claims 3, 8 and 10

Claims 3, 8 and 10 have been cancelled without prejudice. Accordingly, the rejection of these claims is now moot.

Claim 1

Claim 1 is directed to an information-processing device at a communication source, that communicates with an information-processing device at a communication destination through a communication control device at the communication source, and recites:

a span of packet life setting part that sets a span of packet life of a bubble packet transmitted from the information-processing device at the communication source in order to leave a transmission history in the communication control device at the communication source, so that the bubble packet can reach the relay node relaying the packets from the global address to the another global address, based on the number of relay nodes counted by the relay node counter
...

a bubble packet transmitter that transmits the bubble packet having the span of packet life that the span of packet life setting part has set, through the communication control device at the communication source.

That is, a span of packet life setting part sets a span of packet life of a bubble packet transmitted to leave a transmission history in the communication control device based on the number of relay nodes counted by the relay node counter.

By sending such a bubble packet, the information processing device recited in claim 1 may leave a transmission history at the communication control device of the

communication source. Moreover, the bubble packet may be configured such that it does not reach the information processing device at the communication destination so that a wasteful increase in traffic communication may be prevented.

Aggarwal Reference

Aggarwal discloses a User Datagram Protocol (UDP) probe packet that includes a Time-to-Live (TTL) field. The UDP probe packet is a destination field set with a destination IP address. The UDP packet is initially transmitted with the TTL field set to a value of one. The transmission of UDP packet probes is repeated with the TTL increasing by one each time (See Aggarwal at Col. 2, lines 35-47.) That is, in Aggarwal, a series of UDP probe packets are sent from a first node towards a destination IP address. Each successive packet allows the recording in the path list of the next-hop router's IP address returned from each one of the series of UDP packets.

In the Office Action, the Examiner corresponds bubble packets recited in claim 1 to UDP probe packets of Aggarwal. Applicants respectfully disagree with the Examiner regarding the Examiner's contention. More particularly, the bubble packets recited in claim 1 are transmitted in order to leave a transmission history in the communication control device at the communication source. By contrast, the UDP packets of Aggarwal have incremented TTLs which are transmitted to obtain information such as IP address of each relay node and their hop number.

Moreover, although Aggarwal discloses incrementing the TTL of the UDP packet for the purpose of determining the hop number for every relay node, Aggarwal does not disclose or suggest "a span of packet life setting part that sets a span of packet life ... so that the bubble packet can reach the relay node relaying packets from the global address to the another global address," as required by claim 1. That is, Aggarwal does not disclose or suggest the setting of a span of life for a bubble packet so that it reaches a particular node (i.e., the relay node) for relaying the packets from the global address to the another global address.

Accordingly, claim 1 is submitted to patentably distinguish over Aggarwal for at least the above-mentioned reasons.

Claim 11

Claim 11, which includes similar but not identical features to those of claim 1, is submitted to patentably distinguish over Aggarwal for at least similar reasons to those of claim 1.

Claims 2, 4-7 and 9

Claims 2, 4-7 and 9, which include all of the limitations of claim 1, are submitted to patentably distinguish over Aggarwal for at least the same reasons as claim 1.

New Claims 13-16

New claims 13-16, which include all of the limitations of claim 1 or claim 11, are submitted to patentably distinguish over the cited art for at least the same reasons as claim 1 or claim 11.

New claim 13 includes additional patentable features beyond those of claim 1, namely:

a communication control unit for transmitting a port-detecting packet for notifying a server which intermediates communication to the information-processing device at the communication destination, of a global IP address and a port number through which the bubble packet transmitted from the information-processing device at the communication source passed the communication control device at the communication source,

(emphasis added).

New claim 14 includes additional patentable features beyond those of claim 2, namely:

a communication control unit receives a reply packet from the information-processing device at the communication destination to which the global IP address and the port number of the information-processing device at the communication source is notified, so that communication between the information-processing device at the communication source and the information-processing device

at the communication destination bypassing the server is established,

(emphasis added).

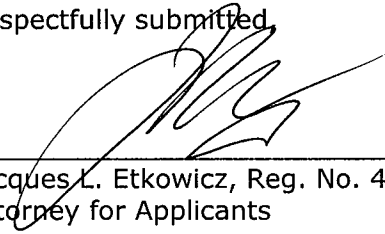
New claims 15 and 16 include similar features to those of claims 13 and 14. Accordingly, claims 15 and 16 are submitted to further patentably distinguish over the cited prior art for at least the reasons set forth above with regard to claims 13 and 14.

Entry and consideration is respectfully requested.

Conclusion

In view of the claim amendments, new claims and remarks, Applicants submit the application is in condition for allowance, which action is respectfully requested.

Respectfully submitted



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